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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,705	06/24/2003	Yoshiki Sugeta	2003_0868A	7523

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EXAMINER

SASTRI, SATYA B

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/601,705

Applicant(s)

SUGETA ET AL.

Examiner

Satya B Sastri

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-9 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/2/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This office action is in response to application filed on June 24, 2003. *Claims 1-9* are now pending in the application.
2. Applicant's election without traverse of *claims 1-7* in the reply filed on August 25, 2004 is acknowledged. Claims 8, 9 are withdrawn from consideration as being drawn to non-elected invention.

### *Claim Analysis*

3. The instant claims that recite an over-coating agent are construed as coating compositions comprising a water-soluble polymer and a water-soluble fluorine compound. Prior art compositions that comprise all the elements of the composition are viewed as capable of functioning as over-coating for forming fine patterns.

### *Claim Rejections - 35 USC § 102 and 103*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. *Claims 1-7* are rejected under 35 U.S.C. 102(b) as anticipated by Nishi et al. (US 5,611,850).

The prior art to Nishi et al. discloses a composition for an anti-reflective coating on resist, which comprises a **water-soluble fluorine compound** and water as the main components (abstract). Examples of the **fluorine-containing organic compounds** disclosed include **acids** such as perfluorobutanesulfonic acid, perfluoroheptanesulfonic acid, perfluorooctanesulfonic acid, perfluorodecanesulfonic acid, perfluoroadipic acid, perfluorooctanoic acid, perfluoroazelaic acid, perfluorosebacic acid etc. Furthermore, as the **water-soluble solid fluorine compound (A)**, the prior art discloses a compound such as 2,2,3,3,4,4,5,5-octafluorohexane-1,6-**diol** (column 3, lines 1-20). The anti-reflective coating composition of the present invention contains these **water-soluble fluorine compounds (A) and (B)** in a total weight amount of from **1 to 10 wt % to an aqueous solvent**. Additionally, the anti-reflective coating composition of the present invention may further contain a **film-formable polymer** such as **polyvinyl alcohol, polyacrylic acid, polyvinyl pyrrolidone and polyvinyl methyl ether** in amounts of **at most 20 wt %**, preferably at most 10 wt %, to the **total amount of fluorine compound** (column 5, lines 5-14). The instantly claimed over-coating agent has all the components recited in the prior art composition and thus reads on the prior art.

7. *Claims 1-7* are rejected under 35 U.S.C. 102(b) as anticipated by Whitbourne (US 5,001,009).

The prior art to Whitbourne discloses hydrophilic coatings which include a **hydrophilic polyolefin** such as **polyvinyl-pyrrolidone** and a water-insoluble stabilizing polymer such as a cellulose ester (abstract). The working example in column 8, lines 40-45, discloses a composition comprising a **water-soluble polymer, PVP**, and **trifluoroethanol**. Thus, the composition of the instant over-coating agent as recited in *claims 1-7* are anticipated by the prior art.

8. *Claims 1, 2, 5, 6* are rejected under 35 U.S.C. 102(b) as anticipated by Miller et al. (US 5,300,394).

Miller et al. disclose aqueous dispersions comprising **fluorosurfactant** (abstract). The **fluorosurfactant** may further contain **carboxyl groups** (column 2, lines 55-65). The dispersions may include 1-100%, more preferably, 0.5-20% based on the weight of the compound (column 5, lines 39-47). The aqueous medium further may further include **water-soluble polymers** such as **polyvinyl alcohol, polyvinyl pyrrolidone, polyethylene oxide** etc. (column 6, lines 1-7). Thus, *claims 1, 2, 5, 6* are anticipated by Miller et al.

9. *Claims 1, 4, 5* are rejected under 35 U.S.C. 102(b) as anticipated by Ishibashi et al. (US 5,554,489).

The prior art to Ishibashi et al. disclose method of forming fine resist pattern using a **water-soluble polymer** such as **polyvinyl amine and polyacrylic acid** and a refractive index

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controller which includes a **fluorine-containing polymer** and a **fluorine-containing surfactant**.

Thus, *claims 1, 4, 5* are anticipated by prior art compositions to Ishibashi et al.

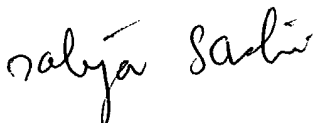
### *Conclusion*

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 212 1112.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached at (571) 212 1114.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SATYA SASTRI

October 4, 2004

TATYANA ZALUKAEVA  
PRIMARY EXAMINER

